Asset Management

Improved Reliability Models for USACE Navigation Structures

PI: Yazmin Seda-Sanabria (GS

Problem: **Need for improved reliability models to predict actual field performance of Corps navigation infrastructure and assist in future investment planning of critical maintenance.**

- **Currently used mechanical and electrical equipment models are based on annual failure rates, not specific to navigation structures.**
- **Geotechnical models currently used yield inconsistent results on expected operational performance.**

Improved Reliability Models for USACE Navigation Structures

Products:

- Time-dependent (capacity vs. demand) reliability models for electrical and mechanical operating components.
- Base geotechnical time-dependent reliability models.

Benefits:

- Significant cost savings on critical maintenance (including major rehabilitation) of Corps navigation infrastructure.
  - Improved engineering tools that can be integrated into economic models to make risk-based sound investment decisions.